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Challenges - File Permissions

Linux Process Management

Processes and The Linux Security Model (8:39)

Listing Processes (ps, pstree) (12:23)

Getting a Dynamic Real-Time View of the Running System (top, htop) (13:12)

Signals and Killing Processes (kill, pkill, killall, pidof) (11:27)

Foreground and Background

Challenges - File Permissions

How to solve these challenges:

- To be consistent with the filenames and paths run the commands on Ubuntu
- Write your solution **in a terminal** and **test it.**
- If your solution is not correct, then try to understand the error messages, watch the video again, rewrite the solution, and test it again. Repeat this step until you get the correct solution.
- **Save** the solution in a file for future reference or recap.

Refer to the image below...

Create a directory with a regular file in it. Work as a non-privileged user.

```
student@ubuntu20-04:~$ mkdir linux
student@ubuntu20-04:~$ echo "This is Ubuntu" > linux/ubuntu.txt
student@ubuntu20-04:~$ tree linux/
linux/
└── ubuntu.txt

0 directories, 1 file
student@ubuntu20-04:~$
```

Based on the above image answer the following questions:

Challenge #1

- Display the permissions of ubuntu.txt
- Remove all permissions of others.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #2

- Remove the read permission of ubuntu.txt for the owner and check if the owner can read the file.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #3

- Using the octal notation, set the permissions of the directory to **rwxrwx---** and of the file to **rw-r-----**

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #4

- Set the permissions of the directory to **0667**. Check if the user (owner) can list its contents, move to the directory and remove it.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #5

- Set the permissions of all the files in the user's home directory to **0640** and the permissions of all directories to **0750**.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #6

- As a non-privileged user list the contents of **/root** using the ls command. See what will happen.
- As root set **SUID** to **ls** and list the contents of **/root** again as a non-privileged user.
- Check the **SUID** permission set on ls
- As root remove the **SUID** bit.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #7

- Set the directory permissions to **0777** and the file permissions to **0000**. As another non-privileged user, try to remove the file.
- Create a new file in the directory and set its permissions to **0644**.
- Set the **Sticky Bit** on the directory.
- As another non-privileged user, try to remove the file.

Are you stuck? Do you want to see the solution to this challenge? Click here.

Challenge #8

- Change the owner and the group owner of all files in the current user home directory to the current user and its primary group.

Are you stuck? Do you want to see the solution to this challenge? Click here.